

WHAT IS CLAIMED IS:

1. A method of manufacturing a semiconductor device, comprising:
providing a wafer substrate having a surface;
forming a first nitride layer over the wafer substrate;
providing a layer of photoresist over the first nitride layer;
patterning and defining the photoresist layer;
etching the first nitride layer unmasked by the photoresist to remove at least a portion of the first nitride layer to expose at least a portion of the substrate surface;
removing the photoresist layer; and
depositing a second nitride layer over the first nitride layer and the exposed substrate surface to form a nitride structure having a first thickness and a second thickness, wherein the first thickness includes a thickness of the first nitride layer.
2. The method of claim 1, wherein the thickness of the first nitride layer is about 11 angstroms.
3. The method of claim 1, wherein the first thickness is greater than a sum of the second thickness and the thickness of the first nitride layer.
4. The method of claim 1, wherein the thickness of the first nitride layer is less than about 11 angstroms.

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5. The method of claim 1, wherein the first nitride layer is grown at a temperature ranging approximately from 700°C to 900°C.

6. The method of claim 1, wherein a difference between the first thickness and the thickness of the first nitride layer is greater than a sum of the second thickness and the thickness of the first nitride layer.

7. The method of claim 1, wherein the first thickness is increased by an increase in a growing temperature of the first nitride layer.

8. A method of manufacturing a semiconductor device, comprising:

- providing a wafer substrate having a surface;
- forming a first nitride layer over the wafer substrate;
- providing a layer of photoresist over the first nitride layer;
- patterning and defining the photoresist layer;
- etching the first nitride layer unmasked by the photoresist to remove at least a portion of the first nitride layer to expose at least a portion of the substrate surface;
- removing the photoresist layer; and
- depositing a second nitride layer over the first nitride layer and the exposed substrate surface to form a nitride structure having a first thickness and a second thickness, wherein the first thickness is different from the second thickness.

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9. The method of claim 8, wherein the first thickness includes the first nitride layer.

10. The method of claim 8, wherein the first nitride layer has a thickness of about 11 angstroms.

11. The method of claim 8, wherein the first thickness is greater than a sum of the second thickness and a thickness of the first nitride layer.

12. The method of claim 8, wherein the first nitride layer is grown at a temperature ranging approximately from 700°C to 900°C.

13. The method of claim 8, wherein the first nitride layer has a thickness of less than about 11 angstroms.

14. The method of claim 8, wherein the first thickness is increased by an increase in a growing temperature of the first nitride layer.